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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PEACHES, RANDY	

ART UNIT	PAPER NUMBER
2686	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/895,702	KUGLER, BRETT E.	
	Examiner	Art Unit	
	Randy Peaches	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,10-13,15-17,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,10-13,15-17,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. ***Claims 1-4, 10-11, 15-17, 19 and 20*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Altschul et al. (U.S. Patent Number 5,965,848), hereinafter referenced as patent "848" in view of Altschul et al (U.S. Patent Number 5,875,393), hereinafter referenced as patent "393", and in further view of Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." in view of applicants admitted prior art.

Regarding ***claims 1 and 17***, Altschul et al. teaches in "848" of a disposable cell phone and method comprising:

- a ribbon-like substrate of dielectric material, which reads on claimed "paper substrate," , hereinafter referenced as "substrate", (see definition of ***paper*** in the cited reference *Webster's New Ninth Collegiate Dictionary).* See column 1 lines 43-45.
- a printed circuit pattern on the said substrate with conductive material. Patent "848" discloses on column 3 lines 29-34. Also, see column 3 lines 21-34.

However, "848" does not clearly disclose a switch electrically coupled to the said circuit. In addition having an input diaphragm and output diaphragm electrically coupled to the said circuit, where both are attached to the said paper substrate in a manner that allows said input diaphragm and output diaphragm to vibrate.

Altschul et al teaches in "393":

- of a switch (52) that is coupled to an integrated circuit 70, hereinafter referenced as "circuit", providing a means of allowing a telephone call to be performed when placed in the "on" mode. See column 4 lines 45-60 and in FIGURE 6
- of a microphone assembly (122), which reads on claimed "input diaphragm", that is connected electrically to the said circuit, where the said microphone being attached to the said substrate by a clip connector (174), which in turn, allows the said microphone to, vibrated relative thereto. See column 7 lines 45-54 and FIGURES 14-16.
- of a earphone assembly (122), which reads on claimed "output diaphragm", that is connected electrically to the said circuit, where the said earphone being attached to the said substrate by a clip connector (174) which in turn, allows the said microphone to vibrated relative thereto. See column 7 lines 38-44 and FIGURES 14-16.
- a battery, providing power and connected to the said circuit by a means of an electrical connector, which reads on claimed "battery electrically connected to the circuit". See column 3 lines 54-62.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the ~~combined~~ teaching of "848", in view of "393" in order to develop a deposable cellular telephone manufactured out of a paper substrate in which the circuitry, functional components and power supply of the said cellular telephone is incorporated therein to provide a more compact and efficient structure.

However, the combination of "848" and "393" fails to mutually teach of a battery formed in the said paper substrate.

The article "Thin, flexible battery needs no case." in the March 1, 2001 edition of ***Machine Design***, reference is made of a battery developed by company Power Paper, Ltd, that is fabricated from proprietary ink-like materials that can be printed, pasted or laminated on almost any substrate, including paper.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teaching "848", in view "393" to further include Stephen Mraz of the March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." in order to develop a deposable cellular telephone manufactured out of a paper substrate in which the circuitry, functional components and power supply of the said cellular telephone is incorporated therein to provide a more compact and efficient structure, especially with the use of a paper-form battery.

Regarding ***claim 2***, as claimed in ***claim 1***, patent "848" discloses where the said phone can be sized at any length, or width. See column 2 lines 44-52.

Regarding ***claims 3 and 19***, as claimed in ***claim 1 and 19***, the patent "848" discloses in FIGURE 5 a cell phone. In addition, patent "393" teaches of graphics being provided on front and rear face for proper display of information. The applicant is claiming that the said paper substrate is a business card including writing. Therefore it is obvious for one to apply the teaching of the article into a business card to achieve the compactness and utility of the said credit card.

Regarding ***claims 4 and 20***, as claimed in ***claim 1 and 17***, Altschul et al teaches in patent "393" of an antenna (134), which reads on claimed "filament antenna", which is embedded as part of body of said substrate. See column 7 lines 1-4 and FIGURE 10. Additionally, the said antenna is incorporated therein on the side, which reads on claimed "edge", of the said substrate.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teaching of "848", in view of "393", to further include Stephen Mraz of the March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." in order to develop a deposable cellular telephone manufactured out of a paper substrate in which the circuitry, functional components and power supply of the said cellular telephone is incorporated therein to provide a more compact and efficient structure. An antenna is additionally disposed as part of the architecture to receive and transmit wireless signal to/from the device.

Regarding ***claim 10***, Altschul et al. teaches in patent "848" of a disposable cell phone and method comprising:

- a ribbon-like substrate of dielectric material, which reads on claimed "paper substrate," , hereinafter referenced as "substrate", (see definition of ***paper*** in the cited reference *Webster's New Ninth Collegiate Dictionary)*. See column 1 lines 43-45.
- a printed circuit pattern on the said substrate. See column 3 lines 21-34.

However, patent 848 does not clearly disclose a switch electrically coupled to the said circuit. In addition having an input diaphragm and output diaphragm electrically coupled to the said circuit, where both are attached to the said paper substrate in a manner that allows said input diaphragm and output diaphragm to vibrate.

Altschul et al teaches in patent 393:

- of a switch (52) that is coupled to an integrated circuit 70, hereinafter referenced as "circuit", providing a means of allowing a telephone call to be performed when placed in the "on" mode. See column 4 lines 45-60 and in FIGURE 6
- of a microphone assembly (122), which reads on claimed "input diaphragm", which is connected electrically to the said circuit, where the said microphone being attached to the said substrate by a clip connector (174), which in turn, allows the said microphone to, vibrated relative thereto. See column 7 lines 45-54 and FIGURES 14-16.
- of a earphone assembly (122), which reads on claimed "output diaphragm", that is connected electrically to the said circuit, where the said earphone being

attached to the said substrate by a clip connector (174) which in turn, allows the said microphone to vibrated relative thereto. See column 7 lines 38-44 and FIGURES 14-16.

- a battery, providing power and connected to the said circuit by a means of an electrical connector, which reads on claimed "battery electrically connected to the circuit". See column 3 lines 54-62.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teaching "848", in view "393" in order to develop a deposable cellular telephone manufactured out of a paper substrate in which the circuitry, functional components and power supply of the said cellular telephone is incorporated therein to provide a more compact and efficient structure.

However, the combination of patent 848 and patent 393 fail to clearly teach of a battery formed in the said paper substrate.

The article "Thin, flexible battery needs no case." in the March 1, 2001 edition of ***Machine Design***, reference is made of a battery developed by company Power Paper, Ltd, that is fabricated from proprietary ink-like materials that can be printed, pasted or laminated on almost any substrate, including paper.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined "848", in view of "393" to further include Stephen Mraz of the March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." in order to develop a deposable cellular telephone manufactured out of a paper substrate in which the circuitry, functional components and

power supply of the said cellular telephone is incorporated therein to provide a more compact and efficient structure.

However, the combination of the patent "848", patent "393" and Stephen Mraz of the March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." fails to teach wherein the said input and output diaphragms are a speaker and microphone assembly constructed both of paper.

The applicant admits on page 5 lines 1-12, that paper speaker technology in the art can be miniaturized for the purposes of the claimed input (22) and output (24) diaphragms and that the said input (22) and output (24) diaphragms are acting as a microphone and a speaker.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of "848", and "393", Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case.", in view of applicant's admitted prior art in order to specifically denote the material of the said input (22) and output (24) diaphragms as being manufactured as a said microphone and a speaker constructed with a miniaturized paper film to be incorporated therein the said substrate.

Regarding ***claim 11***, as claimed in ***claim 10***, Altschul et al teaches in patent 393 of an antenna (134), which reads on claimed "filament antenna", which is embedded as part of body of said substrate. See column 7 lines 1-4 and FIGURE 10. Additionally, the

said antenna is incorporated therein on the side, which reads on claimed "edge", of the said substrate.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teaching "848", "393", to further include Stephen Mraz of the March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." in order to develop a deposable cellular telephone manufactured out of a paper substrate in which the circuitry, functional components and power supply of the said cellular telephone is incorporated therein to provide a more compact and efficient structure. An antenna is additionally disposed as part of the architecture to receive and transmit wireless signal to/from the device.

Regarding ***claim 15***, as claimed in ***claim 10,*** patent "848" discloses where the said phone can be sized at any length, or width. See column 2 lines 44-52.

Regarding ***claim 16***, as claimed in ***claim 10***, the above combination fails to teach the location of the switch, microphone and speaker diaphragms as claimed. However, the examiner asserts that the above limitations would not render the claim patentable over the applied references because they would merely depend on where one would like to place the said switch, microphone and speaker diaphragms on the layer.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of "848", and "393", Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no

case." in view of applicant's admitted prior art to denote the location of the said switch, microphone, and speaker in order to evenly distribute the said components along the layers of the card to ensure a practical user-friendly device.

2. ***Claim 5*** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of "848", and Altschul et al (U.S. Patent Number 5,875,393), hereinafter referenced as patent "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." in view of Woo (U.S. Patent Number 6,317,086 B1).

Regarding ***claim 5***, as the above combination of "848", and "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." are made, the combination according to ***claim 4,*** fails to disclose wherein the antenna includes a nub at one end, said nub being operable to extract the antenna from the substrate.

Woo teaches of an antenna (31) which includes a cap (41), which reads on claimed "nub", on the upper part of the said antenna (31), the said cap (41) allows easy extension, which reads on claimed "extract", from the antenna (31). See column 4 lines 60-65 and FIGURE 4.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings "848", "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no

case." to further include Woo (U.S. Patent Number 6,317,086 B1) in order to incorporate an antenna with a said cap for easy extraction from the said substrate.

3. ***Claim 6*** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Altschul et al. (U.S. Patent Number 5,965,848), hereinafter referenced as patent "848", and Altschul et al (U.S. Patent Number 5,875,393), hereinafter referenced as patent "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." in view of Kawakami et al (U.S. Patent Number 5,933,783).

Regarding ***claim 6***, as the above combination "848", and "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." are made, the combination according to ***claim 1,*** fails to clearly disclose wherein the switch is a slidable switch.

Kawakami et al teaches in column 3 lines 44-49 of a switch (18) formed in various shapes such as a button switch and a slide switch.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of "848", and "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." to further include Kawakami et al (U.S. Patent Number 5,933,783) in order to provide a slidable switch operable in an "on" or "off" mode. When placed in "on" mode, a predetermined number is dial connecting a user to the designated party.

4. ***Claim 12*** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Altschul et al. (U.S. Patent Number 5,965,848), hereinafter referenced as patent "848", Altschul et al (U.S. Patent Number 5,875,393), hereinafter referenced as patent "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." and applicant's admitted prior art in view of Woo (U.S. Patent Number 6,317,086 B1).

Regarding ***claim 12***, as the above combination of "848", "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." and applicant's admitted prior art are made, the combination according to ***claim 11,*** fails to clearly disclose wherein the antenna includes a nub at one end, said nub being operable to extract the antenna from the substrate.

Woo teaches of an antenna (31) which includes a cap (41), which reads on claimed "nub", on the upper part of the said antenna (31), the said cap (41) allows easy extension, which reads on claimed "extract", from the antenna (31). See column 4 lines 60-65 and FIGURE 4.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of "848", "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." and applicant's admitted prior art to further include Woo (U.S. Patent Number

6,317,086 B1) in order to incorporate an antenna with a said cap for easy extraction from the said substrate.

5. ***Claim 13*** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Altschul et al. (U.S. Patent Number 5,965,848), hereinafter referenced as patent "848", Altschul et al (U.S. Patent Number 5,875,393), hereinafter referenced as patent "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." and applicant's admitted prior art in view of Kawakami et al (U.S. Patent Number 5,933,783).

Regarding ***claim 13***, as the above combination of "848", "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." and applicant's admitted prior art are made, the combination according to ***claim 10,*** fails to clearly disclose wherein the switch is a slidable switch.

Kawakami et al teaches in column 3 lines 44-49 of a switch (18) formed in various shapes such as a button switch and a slide switch.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of "848", "393", and Stephen Mraz of March 1, 2001 edition of ***Machine Design,*** "Thin, flexible battery needs no case." and applicant's admitted prior art to further include Kawakami et al (U.S. Patent Number 5,933,783) in order to provide a slidable switch operable in an "on" or "off"

mode. When placed in "on" mode, a predetermined number is dial connecting a user to the designated party.

Response to Arguments

Applicant's arguments filed 3/31/05 have been fully considered but they are not persuasive.

Regarding ***claims 1, 10 and 17*** the Examiner acknowledges the amended language of the presented claims; however, based on the broadest reasonable interpretation of the claimed language presented, the Examiner respectfully maintains his position as to the definition of "paper" cited as prior art, in respect to the Applicant's claimed language.

In response to applicant's argument that the use of prior art fails to apply a reasonable bases to be combinable, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Therefore, ***claims 1-6, 10-13,15-17 and 19-20*** stand rejected.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy Peaches whose telephone number is (571) 272-7914. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Randy Peaches
July 13, 2005

CHARLES APPIAH
PRIMARY EXAMINER